

S. Devi

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#23



1600

RAW SEQUENCE LISTING

DATE: 10/22/2003

PATENT APPLICATION: US/09/612,925E

TIME: 07:41:55

Input Set : N:\CrF4\10072003\I612925E.raw

Output Set: N:\CRF4\10222003\I612925E.raw

1 <110> APPLICANT: Cano, Carlos Antonio Durante
 2 Nieto, Enrique Gerardo Guillen
 3 Acosta, Anabel Alvarez
 4 Munoz, Luis Emilio Carpio
 5 Vazquez, Diogenes Quintana
 6 Rodriguez, Carmen Elena Gomez
 7 Rodriguez, Recardo de la Caridad Siva
 8 Galvez, Consuelo Nazabal
 9 Angulo, Maria de Jesus Leal
 10 Dunn, Alejandro Miguel Martin
 11 <120> TITLE OF INVENTION: Expression System of Heterologous Antigens as Fusion
 Proteins
 12 <130> FILE REFERENCE: LEXSA P-13DIV2
 C--> 13 <140> CURRENT APPLICATION NUMBER: US/09/612,925E
 14 <141> CURRENT FILING DATE: 2000-07-10
 15 <150> PRIOR APPLICATION NUMBER: US 08/930,917
 16 <151> PRIOR FILING DATE: 1997-09-16
 17 <150> PRIOR APPLICATION NUMBER: PCT/CU97/00001
 18 <151> PRIOR FILING DATE: 1997-01-17
 19 <160> NUMBER OF SEQ ID NOS: 30
 20 <170> SOFTWARE: PatentIn version 3.2
 22 <210> SEQ ID NO: 1
 23 <211> LENGTH: 1797
 24 <212> TYPE: DNA
 25 <213> ORGANISM: Neisseria meningitidis (group B)
 26 <400> SEQUENCE: 1
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 28 aatgtagata ttatcgcggt tgaagtaaac gtgggcgaca ctattgctgt ggacgatacc 120
 29 ctgattactt tggaaccga taaagcgact atggacgtac ctgctgaagt tgcaggccta 180
 30 gtcaaagaag ttaaagttaa agtcggcgac aaaatctctg aaggtggttt gattgtcgtc 240
 31 gttgaagctg aaggcacggc agccgctcct aaagccgaag cggctgccgc cccggcgcaa 300
 32 gaagccccta aagctgccgc tcctgctccg caagccgcgc aattcggcgg ttctgccgat 360
 33 gccgagtacg acgtggctgt attgggtggc ggtcccggcg gttactccgc tgcatttgcc 420
 34 cctgccgatg aaggcttgaa agtcgccatc gtcgaacgtt acaaaacttt gggcggcgtt 480
 35 tgctgaacg tcggctgtat cccttccaaa gccttggtgc acaatgccgc cgttatcgac 540
 36 gaagtgcgcc acttggtgc caacggtatc aaatacccg agccggaact cgacatcgat 600
 37 atgcttcgcg cctacaaaga cggcgtagtt tccgcctca cggcggttt ggcaggtatg 660
 38 gcgaaaagcc gtaaagtga cgttatccaa ggcgacgggc aattcttaga tccgcaccac 720
 39 ttggaagtgt cgctgactgc cggcgacgcg tacgaacagg cagcccctac cggcgagaaa 780
 40 aaaatcgttg ctttcaaaaa ctgtatcatt gcagcaggca gccgcgtaac caaactgcct 840
 41 ttcattcctg aagatccgca catcatcgat tccagcggcg cattggctct gaaagaagta 900
 42 cggggcaaac tgctgattat cggcggcggc attatcagcc tcgagatggg tacggtttac 960
 43 agcacgctgg gttcgcgttt ggatgtggtt gaaatgatgg acggcctgat gcaaggcgca 1020
 44 gaccgcgatt tggtaaaagt atggcaaaaa caaacgaat accgttttga caacattatg 1080

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46      ggcgcgaacg cgcctaaaga gccgcaacgc tacgatgccg tattggttgc cgccggccgc      1200
47      ggcgccaacg gcaaactcat cagcgcgga aaagcaggcg ttgccgtaac cgatcgcggc      1260
48      ttcacgaag tggacaaaca aatgcgtacc aatgtgccgc acatctacgc catcgcgac      1320
49      atcgtcggtc agccgatgtt ggcgcacaaa gccgttcacg aaggccacgt tgccgccgaa      1380
50      aactgcgcgc gccacaaagc ctacttcgac gcacgcgtga ttccgggctg tgcctacact      1440
51      tccccgaag tggcgtgggt gggcgaaacc gaactgtccg ccaaagcctc cggccgcaaa      1500
52      atcaccaaag ccaacttccc gtgggcggct tccggccgtg cgattgccaa cggttgcgac      1560
53      aacggcttta ccaagctgat ttttgatgcc gaaaccggcc gcatcatcgg cggcggcatt      1620
54      gtcggtccga acggtggcga tatgatcggc gaagtctgcc ttgccatcga aatgggctgc      1680
55      gacgcggcag acatcggcaa aaccatccac ccgcaccgca ccttgggcga atccatcggt      1740
56      atggcggcgc aagtggcatt ggggtacttg accgacctgc ctccgcaaaa gaaaaaa      1797
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59 <211> LENGTH: 47
60 <212> TYPE: PRT
61 <213> ORGANISM: Neisseria meningitidis (group B)
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63      Met Val Asp Lys Arg Met Ala Leu Val Glu Leu Lys Val Pro Asp Ile
64      1          5          10          15
65      Gly Gly His Glu Asn Val Asp Ile Ile Ala Val Glu Val Asn Val Gly
66      20          25          30
67      Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Asp Leu Glu
68      35          40          45
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71 <211> LENGTH: 146
72 <212> TYPE: DNA
73 <213> ORGANISM: Neisseria meningitidis (group B)
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75      ttccatggta gataaaagaa tggctttagt tgaattgaaa gtgcccgcaca ttggcggaca      60
76      cgaaaatgta gatattatcg cggttgaagt aaacgtgggc gacactattg ctgtggacga      120
77      taccctgatt actttggatc tagaaa      146
79 <210> SEQ ID NO: 4
80 <211> LENGTH: 18
81 <212> TYPE: PRT
82 <213> ORGANISM: Neisseria meningitidis (group B)
83 <400> SEQUENCE: 4
84      Val Asn Val Gly Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu
85      1          5          10          15
86      Asp Leu
88 <210> SEQ ID NO: 5
89 <211> LENGTH: 18
90 <212> TYPE: PRT
91 <213> ORGANISM: Neisseria meningitidis (group B)
92 <400> SEQUENCE: 5
93      Val Glu Val Gly Ser Lys Ile Tyr Val Asp Asp Gly Leu Ile Ser Leu
94      1          5          10          15
95      Gln Val
97 <210> SEQ ID NO: 6
98 <211> LENGTH: 32

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99 <212> TYPE: PRT
100 <213> ORGANISM: Neisseria meningitidis (group B)
101 <400> SEQUENCE: 6
102     Leu Val Glu Leu Lys Val Pro Asp Ile Gly Gly His Glu Asn Val Asp
103         1             5             10             15
104     Ile Ile Ala Val Glu Val Asn Val Gly Asp Thr Ile Ala Val Asp Asp
105         20             25             30
107 <210> SEQ ID NO: 7
108 <211> LENGTH: 32
109 <212> TYPE: PRT
110 <213> ORGANISM: Neisseria meningitidis (group B)
111 <400> SEQUENCE: 7
112     Leu Arg Glu Val Gln Val Pro Asp Arg Lys Leu His Lys Gly Val Gln
113         1             5             10             15
114     Leu Leu Ala Gly Glu Leu Gly Ile Gly Glu Ala Leu Gln Val Asp Asp
115         20             25             30
117 <210> SEQ ID NO: 8
118 <211> LENGTH: 162
119 <212> TYPE: PRT
120 <213> ORGANISM: Neisseria meningitidis (group B)
121 <400> SEQUENCE: 8
122     Met Val Asp Lys Arg Met Ala Leu Val Glu Leu Lys Val Pro Asp Ile
123         1             5             10             15
124     Gly Gly His Glu Asn Val Asp Ile Ile Ala Val Glu Val Asn Val Gly
125         20             25             30
126     Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Asp Leu Asp Ser
127         35             40             45
128     Arg Gly Ile Arg Ile Gly Pro Gly Arg Ala Ile Leu Ala Thr Ala Gly
129         50             55             60
130     Gly Gly Ala Arg Gln Ser Thr Pro Ile Gly Leu Gly Gly Ala Leu Tyr
131         65             70             75             80
132     Thr Thr Ala Gly Gly Gly Ala Arg Lys Ser Ile Thr Lys Gly Pro Gly
133         85             90             95
134     Arg Val Ile Tyr Ala Thr Ala Gly Gly Gly Ala Arg Lys Arg Ile His
135         100            105            110
136     Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Ala Gly Gly Gly Ala Arg
137         115            120            125
138     Lys Arg Ile Thr Met Gly Pro Gly Arg Val Tyr Tyr Thr Thr Ala Gly
139         130            135            140
140     Gly Gly Ala Ser Ile Arg Ile Gln Arg Gly Pro Gly Arg Ala Phe Val
141         145            150            155            160
142     Thr Ile
144 <210> SEQ ID NO: 9
145 <211> LENGTH: 489
146 <212> TYPE: DNA
147 <213> ORGANISM: Neisseria meningitidis (group B)
148 <400> SEQUENCE: 9
149     atggtagata aaagaatggc tttagttgaa ttgaaagtgc ccgacattgg cggacacgaa      60
150     aatgtagata ttatcgcggt tgaagtaaac gtgggcgaca ctattgctgt ggacgatacc      120

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151      ctgattactt tggatctaga ctcgagaggc attcgtatcg gccaggtcg cgcaatttta      180
152      gcaacagctg gcggtggcgc acgtcaatct acccctattg gtttaggtca ggctctgtat      240
153      acgactgccg gcggtgggtgc gcgcaaaagt atcaccaagg gtccaggccg cgtcatttac      300
154      gccaccgcgg gcggcgggtgc ccgtaagcgt atccacattg gccagggccg tgcattctat      360
155      actacagcag gtggtggcgc acgtaaacgc atcactatgg gtcctggtcg cgtctattac      420
156      acgaccgctg gcggcgggtgc tagcattcgc atccaacgcg gccctggtcg tgcatttggtg      480
157      accatatga                                         489
159 <210> SEQ ID NO: 10
160 <211> LENGTH: 47
161 <212> TYPE: PRT
162 <213> ORGANISM: Neisseria meningitidis (group B)
163 <400> SEQUENCE: 10
164      Met Leu Asp Lys Arg Met Ala Leu Val Glu Leu Lys Val Pro Asp Ile
165      1          5          10          15
166      Gly Gly His Glu Asn Val Asp Ile Ile Ala Val Glu Val Asn Val Gly
167      20          25          30
168      Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Glu Thr Asp
169      35          40          45
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172 <211> LENGTH: 27
173 <212> TYPE: DNA
174 <213> ORGANISM: Artificial
175 <220> FEATURE:
176 <223> OTHER INFORMATION: Primer 5' No. 1573
177 <400> SEQUENCE: 11
178      ttccatggta gatamagmtg gctttag                                         27
180 <210> SEQ ID NO: 12
181 <211> LENGTH: 29
182 <212> TYPE: DNA
183 <213> ORGANISM: Artificial
184 <220> FEATURE:
185 <223> OTHER INFORMATION: Primer 3' No. 1575
186 <400> SEQUENCE: 12
187      tttctagatc caaagtaatc agggtatcg                                         29
189 <210> SEQ ID NO: 13
190 <211> LENGTH: 26
191 <212> TYPE: DNA
192 <213> ORGANISM: Artificial
193 <220> FEATURE:
194 <223> OTHER INFORMATION: Primer 3' No. 2192
195 <400> SEQUENCE: 13
196      ggcggttctg ccgattaagg atccga                                         26
198 <210> SEQ ID NO: 14
199 <211> LENGTH: 146
200 <212> TYPE: DNA
201 <213> ORGANISM: Artificial
202 <220> FEATURE:
203 <223> OTHER INFORMATION: Derived fragment from the first 47 amino acids of the P64k
204      antigen of N. meningitidis. The restriction sites NcoI

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205 (positions 3 to 8) and XbaI (positions 139 to 144) are introduced
 206 by PCR, which provokes changes in the nucleotide sequence of this
 207 <400> SEQUENCE: 14
 208 ttccatggta gataaaagaa tggcttttagt tgaattgaaa gtgcccgaca ttggcggaca 60
 209 cgaaaatgta gatattatcg cggttgaagt aaacgtgggc gacactattg ctgtggacga 120
 210 taccctgatt actttggatc tagaaa 146
 212 <210> SEQ ID NO: 15
 213 <211> LENGTH: 47
 214 <212> TYPE: PRT
 215 <213> ORGANISM: Artificial
 216 <220> FEATURE:
 217 <223> OTHER INFORMATION: Stabilizer fragment derived from the first 47 amino acids of
 the
 218 P64k antigen of N. meningitidis
 219 <400> SEQUENCE: 15
 220 Met Val Asp Lys Arg Met Ala Leu Val Glu Leu Lys Val Pro Asp Ile
 221 1 5 10 15
 222 Gly Gly His Glu Asn Val Asp Ile Ile Ala Val Glu Val Asn Val Gly
 223 20 25 30
 224 Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Asp Leu Glu
 225 35 40 45
 227 <210> SEQ ID NO: 16
 228 <211> LENGTH: 16
 229 <212> TYPE: DNA
 230 <213> ORGANISM: Artificial
 231 <220> FEATURE:
 232 <223> OTHER INFORMATION: Oligonucleotide used to introduce restriction sites XbaI,
 EcoV,
 233 and BamHI in the 3' end of the stabilizer fragment of SEQ. ID.
 234 NO. 13
 235 <400> SEQUENCE: 16
 236 ctagatttga tatcag 16
 238 <210> SEQ ID NO: 17
 239 <211> LENGTH: 16
 240 <212> TYPE: DNA
 241 <213> ORGANISM: Artificial
 242 <220> FEATURE:
 243 <223> OTHER INFORMATION: Oligonucleotide used to introduce restriction sites XbaI,
 EcoV,
 244 and BamHI in the 3' end of the stabilizer fragment of SEQ. ID.
 245 NO. 13
 246 <400> SEQUENCE: 17
 247 gatacctgata tcaaat 16
 249 <210> SEQ ID NO: 18
 250 <211> LENGTH: 15
 251 <212> TYPE: PRT
 252 <213> ORGANISM: Human immunodeficiency virus type 1
 253 <400> SEQUENCE: 18
 254 Ser Arg Gly Ile Arg Ile Gly Pro Gly Arg Ala Ile Leu Ala Thr
 255 1 5 10 15
 257 <210> SEQ ID NO: 19
 258 <211> LENGTH: 15

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 10/22/2003
PATENT APPLICATION: US/09/612,925E TIME: 07:41:56

Input Set : N:\Crf4\10072003\I612925E.raw
Output Set: N:\CRF4\10222003\I612925E.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 11
Seq#:14; Line(s) 203
Seq#:15; Line(s) 217
Seq#:16; Line(s) 232
Seq#:17; Line(s) 243
Seq#:26; Line(s) 318
Seq#:27; Line(s) 329
Seq#:28; Line(s) 357
Seq#:29; Line(s) 388
Seq#:30; Line(s) 424

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:11,12,13,14,15,16,17,26,27,28,29,30

VERIFICATION SUMMARY

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L:13 M:270 C: Current Application Number differs, Wrong Format